

### **Projet objectives**

The objective of the project is to contribute to improving the resilience of Nigerien families to climate change, through innovation in irrigated agro systems. The first specific objective is the strengthening of governance and management of water resources and irrigated agro systems. The second is the agro ecological intensification of agricultural production in irrigated agro systems by facilitating market access and the inclusion of vulnerable groups.

### **Background**

A completely landlocked Sahelian country, Niger covers 1,267,000 km<sup>2</sup>. The population in 2017 is estimated at 21 million inhabitants. The population is predominantly young (those under 15 represent more than 50%) and rural (84%). The poverty rate is much higher in rural areas (where more than half of the population is poor) than in urban areas.

Niger is a country with an essentially agro-pastoral vocation in a very constrained ecological environment. Its territory is made up of 45% of pastoral land and 11% of land suitable for cereal-type agriculture (millet, sorghum, cowpea), including 2% of opportunities for irrigated crops. The constraints of the agricultural sector limit the possibility of increasing income in rural areas. Despite this difficult economic situation, availability of water and land offers possibilities for the development of irrigated agro systems. But constraints exist in terms of good management of water resources, management of irrigated systems and agricultural practices (monitoring of the resource and its use, efficiency and / or mastery of the systems put in place, etc.), which would allow both income growth and sustainable land management. The project was born with full awareness of the challenge to overcome to avoid the negative social and environmental impacts which in the past have called irrigation into question (Africa-Europe Agenda for Rural Transformation, 2018).



### **Theory of change to achieve the objectives**

To achieve its objectives, the project aims to involve the world of research and universities in a participatory action research process, where all the actors involved work in solidarity for the sustainable intensification of irrigated agriculture in Niger. The project aims to produce useful knowledge and develop agro ecological production systems, to strengthen coordination between actors for the management of water resources and the capacity of local actors to co-innovate in irrigated agro systems. The project will take place at several levels (local and national) and particular emphasis is placed on innovation or consultation platforms.

The challenge is huge and is based on the modernization of research methods and equipment, by strengthening ties with the agricultural sector and ties with international research centers. The project will be based on an Inter-institutional and multi-stakeholder Innovation Platform for Irrigated Agro systems (IP). It will bring together all the institutions participating in the project and other actors and institutions collaborating with the project. The platform will allow the dissemination of knowledge and the exchange of experience on innovation. It will benefit from the results of the project work on water resource management for irrigation and on innovation in irrigated production systems. It will facilitate the harmonization of intervention methodologies by promoting exchanges and synergies between project stakeholders and outside the project. This platform will operate permanently once

the project is completed, to guarantee a space for consultation allowing the promotion of permanent innovation processes in the field of irrigated agriculture.

The project will work to strengthen multi-scale planning and management of water resources for agriculture. The actions will be entrusted to an institutional innovation center for the management and governance of water resources for irrigation (PIM). Actions will consist of improving and modernizing the planning, management and governance of water resources, by strengthening the capacities of the competent public bodies, in interaction with university and research establishments. Actions will also include developing information and monitoring systems focused on the sustainable development of irrigation in Niger.

The project will also work on the agro ecological intensification of irrigated agro systems. Co-innovation activities will be carried out within the Local Innovation Poles (LIP), which will cover the intervention areas of the Tillabéri, Tahoua and Maradi regions. The LIPs will bring together all of the actors in the rural world (producers, decentralized technical services, local authorities, etc.) as well as actors in research, agricultural advice and development in general. Their function will be to bring together the players around issues that have been identified with them in order to experiment, develop and then offer innovative technical solutions on a larger scale. These solutions will be based on the principles of agro ecology.

### **Main activities**

The activities revolve around the expected results within the framework of the project.

**Result 1.1.** Institutions involved in research, innovation and water management for agriculture improve their capacities and coordination for the benefit of farmers. The activities linked to this result will lead to the creation and operation of an Innovation Platform for in Irrigated Agro systems (IP) and will facilitate interaction, access to information and innovation in the LIP and PIM.

- ✓ Creation and operation of a space for concertation between stakeholders in research and management of water resources for agriculture.
- ✓ Capitalization of previous experiences at national and international level.
- ✓ Support for co-innovation and global analysis of results, needs and lessons
- ✓ Exchange of knowledge and dissemination of results.
- ✓ Training to build the capacity of R + D + I specialists

**Result 1.2.** Multi-scale planning and management of water resources for agriculture are strengthened. The activities of this result will be entrusted to the Institutional Pole of Innovation for the Management and Governance of Water Resources for Irrigation (PIM).

- ✓ Constitution and planning of the PIM
- ✓ Dynamic Geographic Information System of irrigated agro systems
- ✓ Development of a national artificial aquifer feeding strategy.
- ✓ Study for the optimization of artificial aquifer recharge structures in two agricultural basins in Niger.
- ✓ Training for water management and governance for agriculture.

**Result 2.1.** The agro ecological intensification of irrigated agro systems is improved. Co-innovation activities will be carried out within the Local Innovation Poles (LIP).

- ✓ Constitution and planning of the three local innovation poles.
- ✓ Determination of the reference scenario (for co-innovation)
- ✓ Co-innovation phase
- ✓ Establishment of an innovation demonstration center.

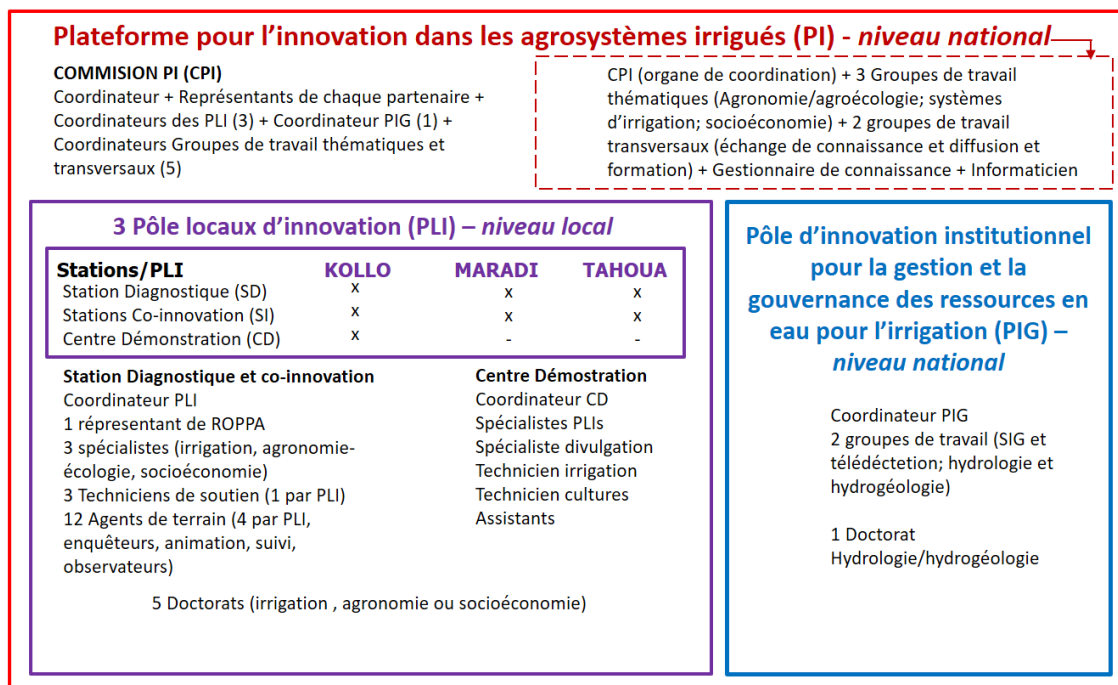
- ✓ Validation and dissemination (of co-innovations) at the LIP level.

### Organization

The Project Management Unit (PMU) will be the cell responsible for the technical and financial management of the intervention and will respond to the Spanish Agency for International Development Cooperation (AECID). She will have a full-time team.

The governance of the Project will be ensured by the innovation platform in irrigated agro systems (IP) through two different types of committees, one of a technical nature (technical committee) and which will meet twice a year; and another of a more institutional nature (steering committee), which will take place once a year. The two committees will be created by the AECID Technical Cooperation Office.

The following graphic shows the organization of the project:



### Implementing organisation

The Project Management Unit

### Project partners

- ✓ Ministry of Agriculture and Livestock (MAGEL),
- ✓ Higher Center for Scientific Research (CSIC),
- ✓ Agrarian Transformation Company (TRAGSA),
- ✓ Food and Agriculture Organization of the United Nations (FAO),
- ✓ Federative Research Structure "Resilience of Agroecosystems to the Climate and Ecological Intensification in the Sahel" (SFR RACINES),
- ✓ Network of farmers 'and producers' organizations in West Africa (ROPPA),
- ✓ Practical Institute for Rural Development (IPDR)

### Other stakeholders

- ✓ Agricultural Council Promotion Agency (APCA),

- ✓ Network of Chambers of Agriculture (RECA),
- ✓ Regional Chambers of Agriculture (CRA)

**Region**

Niger, Tahoua, Tillaberi and Maradi regions

**Financing and co-financing**

EU	€ 5,000,000
Spanish Agency for International Development Cooperation (AECID)	€ 243,000
Total budget	€ 5,243,000

**Duration**

48 months (2020-2024)

